

Claims 1-2, 5, 7 and 13 were rejected under 35 U.S.C. § 102(e) as being anticipated by Ginzboorg. This rejection clearly cannot stand. A § 102(e) rejection requires the Examiner to show that all aspects of a given claimed invention are within the four (4) corners of the reference. Here, Ginzboorg is not even close to meeting this rigid legal standard. By way of brief background, the present invention relates generally “to techniques that enable networks and business entities to intelligently optimize their Internet connectivity” (page 1, lines 6-7, emphasis supplied), e.g., by “providing a method and system for automated and proactive local link testing, preferably to a specified set of “core” points in each destination AS [autonomous system], with the resulting data being useful for automatically instructing a host router to re-prefer given outbound paths on a granular network-by-network basis or, if appropriate, even to shut down poorly-performing upstream Internet connections (page 4, lines 3-8, emphasis supplied). As described, the invention “enables a provider (e.g., an ISP, enterprise or the like) to set automatically, or to have suggested, a router configuration based generally on traffic analysis of the Internet (page 4, lines 13-15, emphasis supplied).

In general, the subject matter of this application concerns routing over the Internet, what the title of the application refers to (in a preferred embodiment) as a “multi-homed BGP routing environment.” Ginzboorg, in stark contrast, has nothing to do with routing over the Internet. Indeed, one can search the entire ‘410 specification and will not find a single reference to the Internet, to the goal of optimizing Internet connectivity, or to any of the particulars of the described subject matter such as autonomous systems, multi-homed routers, transit IP networks, or a multi-homed BGP routing environment (just to name a few). Its title notwithstanding, Ginzboorg relates entirely to telephone call routing, which is a distinct and separate art from that of routing over Internet Protocol (IP) data networks. A call control module as illustrated in Figure 2a is used to implement the described routing scheme. In Ginzboorg, the telephone call routing is concerned with selecting one of a set of alternative subdestinations associated with a particular node. Attributes describe the properties of the subdestination, with the properties being the conditions that have to be true in order that the subdestination (alternative) might be selected by a routing process. According to this process, the attributes are checked in order to see if the subdestination is

suitable for the call attempt at that moment. A subdestination attribute can be associated with load or congestion. After one of the alternatives (subdestinations) has been selected for testing in the routing procedure, the process continues with a matching of its attributes. Matching is performed by calling a matching operation corresponding to the attribute. If the matching of all attributes is successful, the subdestination is returned to the call control module as the selected alternative.

The Examiner's attempt to read Ginzboorg on claims 1-2, 5, 7 and 13 is misplaced. As noted above, anticipation under § 102(e) requires identical subject matter. In paragraph 4 of the Office Action, it is telling that the Examiner makes no mention of either claim preamble, namely "[a]pparatus for use with a multi-homed router connectable to a plurality of destination networks through at least first and second transit networks." (claim 1) or "a multi-homed router connectable to a plurality of destination networks through at least first and second transit networks" (claim 13). This failure, in of itself, dooms the anticipation rejection.

The Examiner is also incorrect that Ginzboorg teaches the subject in the first full paragraph of each of claims 1 and 13: "code executed in accordance with a set of one or more configurable parameters to initiate periodic path quality measurements for each of a set of transit network/destination network links, wherein an overriding test route identifying each transit network/destination network link is configured into the router at the time of the path quality measurement and then withdrawn after the measurement." Ginzboorg does not perform "periodic path quality measurements for each of a set of transit network/destination links." Moreover, as noted above, there is no disclosure or suggestion in Ginzboorg regarding a multi-homed router or, more to the point, the use of an "overriding test route" that is "configured into the router" during a given measurement and then withdrawn. This latter technique is described, for example, beginning at page 10, line 24, and continuing through page 11, line 27. The Examiner makes no effort to identify this subject matter in Ginzboorg for obvious reasons – it is simply not there.

The Examiner also errs in construing Ginzboorg to read on the subject matter of the second and third paragraphs of each of claims 1 and 13: "code executed following the path quality measurements for evaluating whether a first transit network/destination

link is a candidate for rerouting to a second transit network/destination network link,” and “code responsive to satisfaction of a given path evaluation criteria and being executed to establish a communication with the router to facilitate a reroute from the first to the second transit network/destination network link (emphasis supplied).”

Ginzboorg, in contrast, concerns selection of one of a set of subdestinations in the first instance, not the claimed “rerouting” from one network link to another.

Stated plainly, Ginzboorg does not disclose or suggest any of the recited subject matter of claims 1-2, 5, 7 or 13. Indeed, the Examiner errs in equating the “transit exchange” 63 and the “destination exchange” 62 of Figure 7 in Ginzboorg with the recited “transit network/destination network link.” This is an overlap of nomenclature, but not one of subject matter. The transit exchange is not an IP multi-homed router or an adjunct to any such router. Moreover, as required by each of claims 1 and 13, there is no configuring of an “overriding test route,” and there is no concept of rerouting from any first to second transit network/destination network link. These are explicit claim limitations that must be found in the cited reference, and they clearly are not.

Accordingly, for at least these reasons, the § 102(e) rejection should be withdrawn.

Dependent claims 3-4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ginzboorg as applied to claims 1-2, further in view of Thomas et al., U.S. Patent No. 6,665,271. In particular, Thomas et al. are cited for their alleged teaching of a probe type (claim 3) being an ICMP packet (claim 4). Dependent claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Ginzboorg as applied to claims 1-2, further in view of Tzing et al., U.S. Patent No. 6,061,712. Tzeng et al. are cited for their alleged teaching of a method “for IP routing table lookup.” Dependent claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Ginzboorg as applied to claims 1-2, further in view of Agarwal, et al U.S. Patent No. 6,760,777. Agarwal et al. are cited for their discussion about iBGP. Finally, dependent claim 9 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Ginzboorg as applied to claims 1-2, further in view of Munger et al., U.S. Patent No. 6,502,135. Munger et al. are cited for their teaching of a secure session between a computer and a router. These rejections are respectfully traversed.

Whether or not particular subject matter “as a whole” would have been obvious to one of ordinary skill in the art at the time an invention was made under § 103(a) depends on underlying factual inquiries including, among other things: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; and (3) the differences between the prior art and the claimed invention. See, e.g., Monarch Knitting Mach. Corp. v. Sulzer Morat GMBH, 139 F.3d 877, 881, 45 USPQ2d 1977, 1981 (Fed. Cir. 1998). Measuring a claimed invention against the standard established by §103 requires the difficult but critical step of casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. See, e.g., W.L. Gore & Assoc., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed. Cir. 1983). In re Dembiczak, 175 F.3d 994, 1000, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). The Federal Circuit has cautioned the PTO and the Courts that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references. See, e.g., C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998) (describing “teaching or suggestion or motivation [to combine]” as an “essential evidentiary component of an obviousness holding”); In re Rouffet, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) (“the Board must identify specifically . . . the reasons one of ordinary skill in the art would have been motivated to select the references and combine them”); In re Fritch, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992) (examiner can satisfy burden of obviousness in light of combination “only by showing some objective teaching [leading to the combination]”); In re Fine, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) (evidence of teaching or suggestion “essential” to avoid hindsight); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 297, 227 USPQ 657, 667 (Fed. Cir. 1985) (district court’s conclusion of obviousness was error when it “did not elucidate any factual teachings, suggestions or incentives from this prior art that showed the propriety of combination”). See also Graham, 383 U.S. at 18, 148 USPQ at 467 (“strict observance” of factual predicates to obviousness conclusion required). Combining prior art references without evidence of such a suggestion,

teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight. See, e.g., Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985) ("The invention must be viewed not with the blueprint drawn by the inventor, but in the state of the art that existed at the time.").

The evidence of a suggestion, teaching, or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved, see Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996). The range of sources available, however, does not diminish the requirement for actual evidence. Moreover, the showing must be *clear and particular*. See, e.g., C.R. Bard, 157 F.3d at 1352, 48 USPQ2d at 1232. Broad conclusory statements regarding the teaching of multiple references, standing alone, are not "evidence." E.g., McElmurry v. Arkansas Power & Light Co., 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993).

In analyzing alleged obviousness, the scope and content of the prior art must first be determined. In this regard, a detailed discussion of Ginzboorg, the primary reference, has been provided above and is incorporated herein. Dependent claims 3-4, 6 and 8-9 concern various features of an "[a]pparatus for use with a multi-homed router connectable to a plurality of destination networks through at least first and second transit networks." Ginzboorg, as noted above, deals primarily with telephone call routing. In the first instance, one of ordinary skill in the art would not look to Ginzboorg (a telephone call routing patent) to address the problems associated with multi-homed routing. As related to the subject matter of this application and Ginzboorg, IP routing (data networking) and call routing (telephone networking) are based on different systems, techniques, protocols and algorithms. Thus, arguably Ginzboorg is non-analogous art that cannot support the proposed combination of references. See, MPEP §2141.01(a).

Even if Ginzboorg were analogous art, however, the Examiner's alleged suggestion or motivation to combine (see, e.g., paragraphs 11, 13, 6, 19 and 22) in each case is conclusory, i.e., based on the wording of the respective claim in question.

The Examiner does not identify any particular text or other support in either the primary reference or any secondary reference to support this alleged suggestion or motivation. Thus, and with all due respect, each purported combination identified by the Examiner is more accurately described as a hindsight reconstruction of the claimed invention. This is impermissible and does not support an obviousness rejection.

Moreover, Applicant does not claim to have invented ICMP packet probes, IP routing table lookup, iBGP or its use, or secure connections to a router; nevertheless, the subject matter of each of claims 3-4, 6 and 8-9, taken as a whole, is clearly non-obvious for the reasons set forth above with respect to Ginzboorg.

Claims 10 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ginzboorg in view of Tzeng et al. and Shah et al., U.S. Patent No. 6,292,832. Among other deficiencies, Ginzboorg does not teach “periodically conducting local traffic analysis of outgoing packets transmitted to a set of IP addresses in [a plurality of] destination autonomous systems.” As already noted, the patent has nothing to do with IP networking, or performing traffic analysis of such networks. For similar reasons, and because it does not disclose or suggest any such “local traffic analysis,” the patent cannot teach “selecting a best transit autonomous system for a given destination autonomous system given the then-existing connectivity conditions.” Ginzboorg does not control a “router connectable to a plurality of destination autonomous systems” and thus cannot teach “automatically logging into the router and entering a new configuration to cause the router to reevaluate all routes heard from the selected transit autonomous system according to the new configuration.” Tzeng et al. allegedly teach IP routing table lookup, and Shah et al. allegedly teach selecting a service in an autonomous network. Once again, the Examiner has misunderstood the point of the claimed invention. Claim 10 describes subject matter that is neither remotely described nor suggested by the primary reference. Ginzboorg selects subdestinations during the routing of a call attempt in a telephone network. The method of claim 10 selects “a best transit autonomous system for given destination autonomous system” given then-existing connectivity conditions. Ginzboorg, being unrelated to data networking, does not mention autonomous systems or routing between such systems, e.g., using multi-

homed routing solutions. The call control module in Ginzboorg is not a multi-homed router, nor an adjunct thereto.

The secondary references do not teach the recited functionality absent from Ginzboorg. Moreover, even if Ginzboorg is analogous art, which is arguable for the reasons cited above, the Examiner's combination of the references arguably is based on a hindsight reconstruction, and not on any particular suggestion or motivation that is evident from the references themselves. The alleged combination does not, in any event, teach at least the subject matter of "automatically logging into [a] router and entering a new configuration to cause the router to reevaluate all routes heard from [a] transit autonomous system [selected based on then-existing connectivity conditions] according to the new configuration."

A Notice of Allowance is respectfully requested.

Respectfully submitted,



Martin Korn
Registration No. 28,317

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LOCKE LIDDELL & SAPP LLP
2200 Ross Ave., Suite 2200
Dallas, Texas 75201-6776
(214) 740-8549 Telephone
(214) 756-8549 Facsimile